UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION II

DATE: JUL 2 1 1995

SUBJECT: Potential Action at Cornell-Dubilier Site, S. Plainfield, NJ

FROM: Richard Spear, Chief
Surveillance and Monitoring Branch

TO: Richard Salkie, Associate Director
Removal and Emergency Preparedness Program

210514

It has come to our attention, as a result of a site inspection performed by Malcolm Pirnie Inc., that a potentially hazardous environmental condition may exist at the former Cornell-Dubilier Site in downtown South Plainfield, NJ. High levels of PCB Arochlor-1254 are found in soils at the site (up to 1,100 ppm) and in the nearby unnamed tributary to Bound Brook (up to 550 ppm of Arochlor-1254). Elevated levels of cadmium (36.7 ppm), chromium (78.6 ppm), lead (2,200 ppm), mercury (2.9 ppm) and silver (26.7 ppm) are also found in the soils at the site.

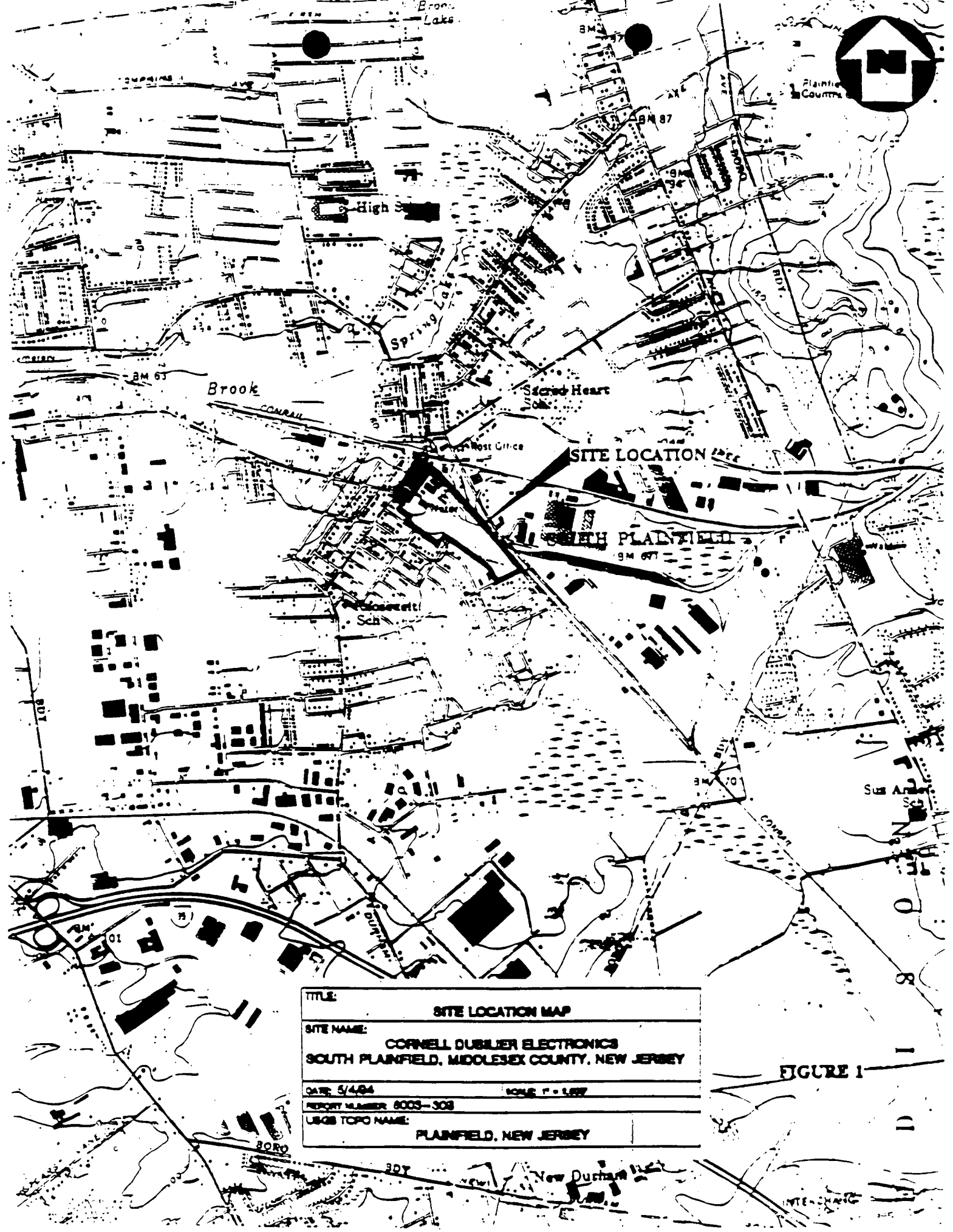
The site is not fenced and there are several homes within 200 feet of the site boundary. It is estimated that between 10 and 100 workers are employed at the Hamilton Industrial Park (the site's current name). Sampling results indicate that more than 0.1 miles of wetlands have been actually contaminated with Level II concentrations of PCBs.

Please review this information to determine if any stabilization or removal actions are necessary. A copy of the site screening letter prepared as part of the Hazardous Ranking System Package is attached to provide more detailed information.

Attachment

CC: D. Santella (2ERRD-PSB)

ATTACHMENT 1
CORNELL DUBILIER ELECTRONICS, INC.
FIGURES AND TABLES



TITLE:	SITE LOCATION MAP
SITE NAME:	CORNELL DUBILIER ELECTRONICS SOUTH PLAINFIELD, MIDDLESEX COUNTY, NEW JERSEY
DATE: 5/4/84	SCALE: 1" = 1,000'
REPORT NUMBER: 8003-308	
USGS TOPO NAME:	PLAINFIELD, NEW JERSEY

FIGURE 1

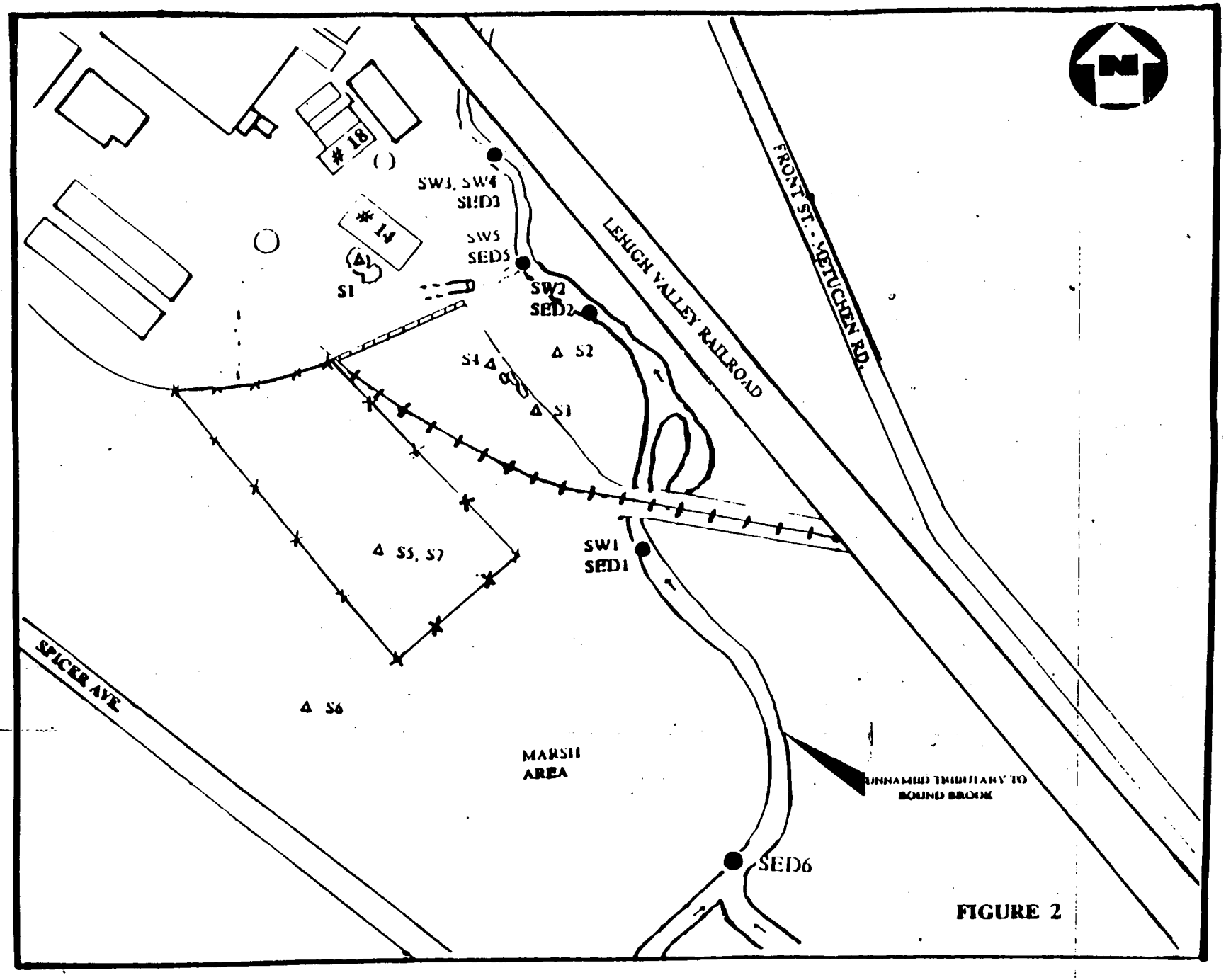


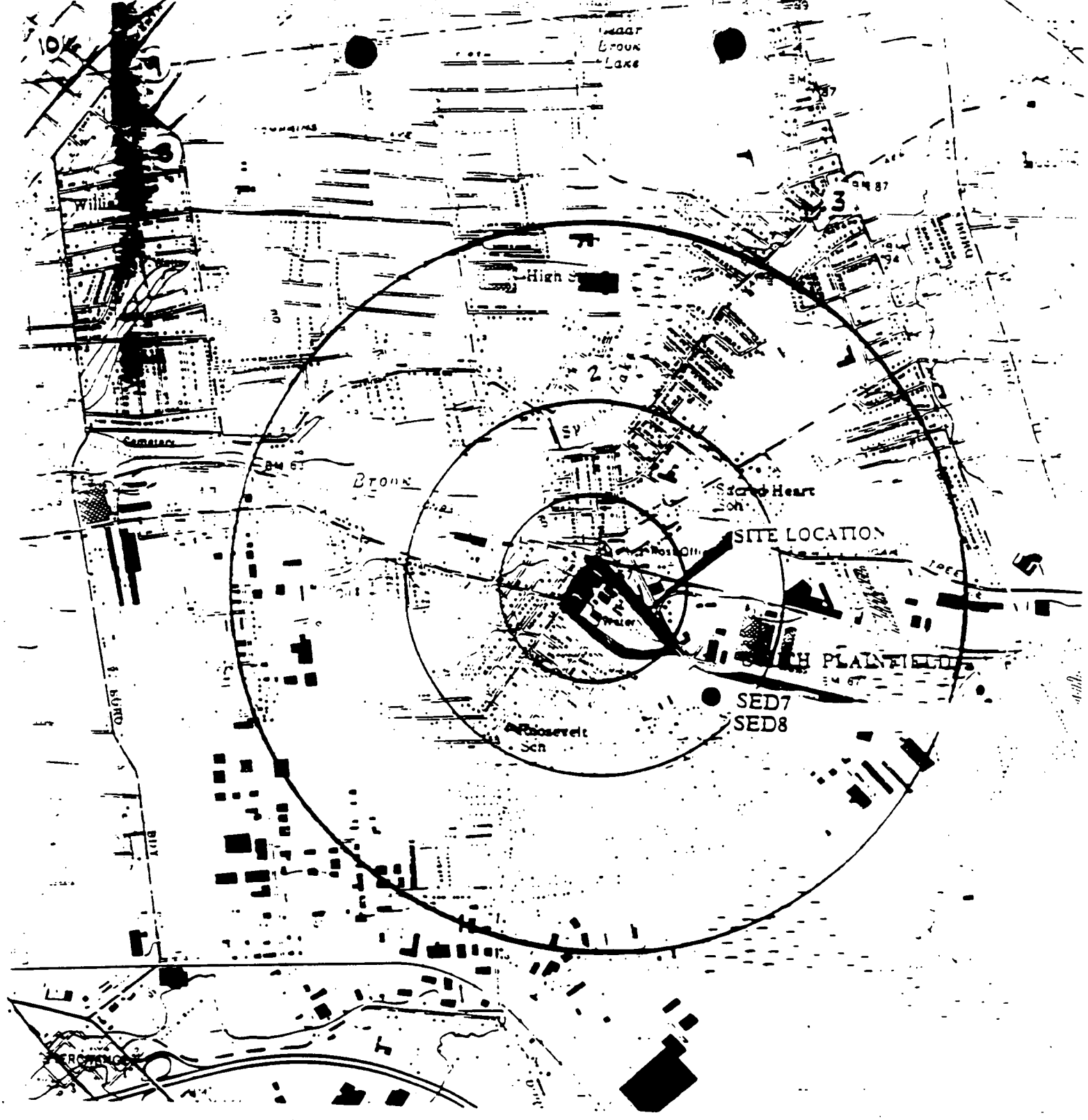
FIGURE 2

MAP KEY

SOIL SAMPLE △

SURFACE WATER/SEDIMENT SAMPLE ●

CORNELL DUBILIER ELECTRONICS
SOUTH PLAINFIELD, MIDDLESEX COUNTY, NEW JERSEY
SAMPLE LOCATION MAP
NOT TO SCALE



CORNELL DUBILIER ELECTRONICS
SOUTH PLAINFIELD, MIDDLESEX COUNTY, NEW JERSEY
OFF-SITE SAMPLE LOCATION MAP
SCALE: 1" = 2,000 FT.

FIGURE 3

TABLE 1
Analytical Data[1]
Cornell Dubilier Site Inspection Prioritization Sampling Event - June 8, 1994

Hazardous Substance	Media	Background Sample Location	Background Sample Concentration µg/kg[2]	Contaminated Sample Location	Contaminated Sample Concentration µg/kg
arsenic	SOIL	S6	3,200	S1	16,700
				S2	15,200
				S3	25,700
				S4	12,900
cadmium	SOIL	S6	ND[3]	S4	4,700
				S5	33,200
				S7	36,700
chromium	SOIL	S6	11,900	S4	78,600
lead	SOIL	S6	43,200	S1	178,000
				S2	348,000
				S3	198,000
				S4	419,000
				S5	2,200,000
				S7	1,990,000
mercury	SOIL	S6	ND	S1	2,400
				S2	980
				S3	240
				S4	2,900
				S5	470
				S7	760
PCBs	SOIL	S6	8,200	S1	68,000
				S2	110,000
				S5	1,100,000
				S7	1,100,000
silver	SOIL	S6	1,100 J[4]	S2	6,800
				S5	28,700
				S7	22,900
PCBs (Aroclor-1254)	SEDIMENT	SED6[5]	520 E	SED1	550,000
		SED7[5]	250 E	SED2	3,700
		SED8[5]	310	SED3	4,500
				SED5	51,000

NOTES

1 All data has been analyzed and validated utilizing USEPA Contract Laboratory Program Protocols.
2 µg/kg = micrograms per kilogram
3 ND = Not Detected
4 J = estimated value, compound present below CRQL but above IDL
5 Background sediment samples were collected during a separate sampling event on October 13, 1994.

ATTACHMENT 2
CORNELL DUBILIER ELECTRONICS, INC.
PROJECT NOTES

MALCOLM PIRNIE, INC. PROJECT NOTES

To:File	Date:June 6, 1995
From:Andrew Clibanoff	Project #:8003-454
Subject:Waste Source Calculations	Site Name:Cornell Dubilier Electronics, Inc.

One waste source has been identified at the Cornell Dubilier Electronics, Inc (CDEI) site.

Waste Source 1 (Contaminated Soil): CDEI tested transformer oils at the site for an unknown period of time until the company vacated the site in 1961. It was alleged during CDEI's period of operation that the company dumped transformer oil contaminated with polychlorinated biphenyls (PCBs) directly onto site soils. Former employees have reportedly claimed that transformers were buried behind the facility during the same time period. Surficial soil samples were collected from six locations during a June 1994 USEPA sampling event. Analyses of the soil samples detected the following CERCLA hazardous substances at concentrations greater than three times background levels: arsenic (25.7 mg/kg), cadmium (36.7 mg/kg), chromium (78.6 mg/kg), lead (2,200 mg/kg), mercury (2.9 mg/kg), PCBs (Aroclor-1254 @ 1,100,000 µg/kg), and silver (26.7 mg/kg). An area of > 0 square feet is assigned to this waste source.

MALCOLM PIRNIE, INC. PROJECT NOTES

To:File	Date:June 20, 1995
From:Andrew Clibanoff	Project #:8003-454
Subject:Groundwater Apportionment	Site Name:Cornell Dubilier Electronics

There are two public water suppliers that draw water from wells located within four miles of the Cornell Dubilier Electronics Site: Middlesex Water Company and Elizabethtown Water Company.

Middlesex Water Company

Middlesex Water Company (MWC) utilizes 32 wells in conjunction with a surface water intake and water purchased from the Elizabethtown Water Company to supply potable water to approximately 52,000 service connections in the communities of South Plainfield, Metuchen, Carteret, Woodbridge, Edison and portions of Clark. A total population of 140,920 (52,000 service connections x 2.71 people/household in Middlesex County) receives its drinking water from Middlesex Water Company. Water is also provided via bulk transmission lines to the communities of Edison Township, Highland Park, Old Bridge MUA, Marlboro Township MUA and Sayreville. Although the system is interconnected in such a way that it is possible for water from any water supply unit to reach the bulk transmission lines, practically all of the water shipped in the bulk transmission lines originates from the surface water intake. The surface water intake accounts for 63.2% of the total system flow for MWC, wells account for 31.4%, and 5.4% is purchased from the Elizabethtown Water Company.

Apportionment Calculation

1 Wellfield Name	2 No. of wells	3 % of total system flow (1994)	4 Population Wellfield (Column 3 * 140,920)
Park Avenue	15	18.5	26,070
Spring Lake	4	2.9	4,087
Maple Avenue	2	1.8	2,537
Sprague Ave. Nos. 1 & 2	2	2.8	3,946
Tingley Lane North & South	9	5.4	7,610
	32	31.4%	44,250

The Sprague Avenue wells and six of the fifteen Park Avenue wells are drawing water from the stratified drift. All of the other wells owned by Middlesex Water Company tap the Brunswick Aquifer. The Spring Lake Wellfield is in the 0.5 to 1 mile ring. The Park Avenue, Maple Avenue, and Sprague Avenue Wellfields are located in the 1-2 mile ring. The Tingley Lane Wellfield is located in the 2-3 mile ring.

Stratified Drift

Population served in 1-2 mile ring = (Park and Sprague Ave. Wells) = (10,428 + 3,946) = 14,374

Brunswick Aquifer

Population served in ½-1 mile ring = Spring Lake Wells = 4,087
Population served in 1-2 mile ring = (Park and Maple Ave. Wells) = (15,642 + 2,537) = 18,179
Population served in 2-3 mile ring = Tingley Lane Wellfield = 7,610

To:File	Date:June 6, 1995
From:Andrew Cilbanoff	Project #:8003-454
Subject:Groundwater Apportionment	Site Name:Cornell Dubilier Electronics

Elizabethtown Water Company (EWC)

Many communities within four miles of the site obtain their potable water from the Elizabethtown Water Company (EWC). EWC supplies drinking water to the communities of Somerville, Bridgewater Township, Warren Township, Green Brook, Dunellen, Middlesex Borough, Bound Brook, South Bound Brook, Piscataway and portions of Franklin Township.

The EWC distribution system currently blends water from five surface water intakes with water from 76 operating wells to provide water to 183,853 service connections. A total population of 498,241 (183,853 service connections x 2.71 people/household in Middlesex County) receives its drinking water from Elizabethtown Water Company. Surface water makes up roughly 85% of the total system flow with one of the intakes on the Raritan River providing more than 40% of the total system flow. The distribution system is completely interconnected and all of the wells within four miles of the site tap the Brunswick Formation. The population served by groundwater within four miles of the site was estimated based on pumpage capacity. There are 21 operating EWC wells within four miles of the Cornell Dubilier Site. Two EWC operating wells (serving 2,571 people) are located within the 1-2 mile ring, four wells (serving 3,196 people) are located in the 2-3 mile ring and 15 wells (serving 14,063 people) are located within the 3-4 mile ring.

Summary of Apportionment Calculations

Stratified Drift

Ring (mi)	Middlesex Water Co.	Elizabethtown Water Company	Total Population
0 - 0.25	0	0	0
0.25 - 0.5	0	0	0
0.5 - 1	0	0	0
1 - 2	14,374	0	14,374
2 - 3	0	0	0
3 - 4	0	0	0
Total:	14,374	0	14,374

Brunswick Aquifer

Ring (mi)	Middlesex Water Co.	Elizabethtown Water Company	Total Population
0 - 0.25	0	0	0
0.25 - 0.5	0	0	0
0.5 - 1	4,087	0	4,087
1 - 2	18,179	2,571	20,750
2 - 3	7,610	3,196	10,806
3 - 4	0	14,063	14,063
Total:	29,876	19,830	49,706

Elizabethtown Water Compa
Active Well List - June 15, 1995

	Municipality	Facility Name	Well Depth (feet)	Formation	Pump Cap. (gpm)	% Total System Flow	Population Per Well
1	Bound Brook	Mountain Sta. #1	366'	Brunswick	375	0.21%	1,042
2	Bound Brook	Mountain Sta. #1	403'	Brunswick	350	0.20%	973
3	Bound Brook	Mountain Sta. #3	352'	Brunswick	—	0.00%	0
4	Bridgewater	Papen Road	225'	Basalt	310	0.17%	862
5	Bridgewater	Wells Road #3	230'	Basalt	45	0.03%	125
6	Bridgewater	Wells Road #2	230'	Basalt	40	0.02%	111
7	Cranbury	Cranbury Well #1A	260'	Farrington	300	0.17%	834
8	Cranbury	Cranbury Well #2	110'	Old Bridge	—	0.00%	0
9	Cranbury	Cranbury Well #3	298'	Farrington	400	0.22%	1,112
10	GREEN BROOK	GREEN BROOK #1	451'	BRUNSWICK	310	0.17%	862
11	GREEN BROOK	GREEN BROOK #2	376'	BRUNSWICK	650	0.36%	1,807
12	GREEN BROOK	GREEN BROOK #3	550'	BRUNSWICK	60	0.03%	167
13	GREEN BROOK	GREEN BROOK #4	400'	BRUNSWICK	350	0.20%	973
14	GREEN BROOK	GREEN BROOK #5	454'	BRUNSWICK	315	0.18%	875
15	GREEN BROOK	GREEN BROOK #6	373'	BRUNSWICK	280	0.16%	778
16	GREEN BROOK	GREEN BROOK #7	545'	BRUNSWICK	180	0.10%	500
17	GREEN BROOK	GREEN BROOK #8	445'	BRUNSWICK	500	0.28%	1,390
18	GREEN BROOK	GREEN BROOK #9	507'	BRUNSWICK	500	0.28%	1,390
19	GREEN BROOK	GREEN BROOK #11	433'	BRUNSWICK	340	0.19%	945
20	GREEN BROOK	ROCK AVENUE	350'	BRUNSWICK	330	0.18%	917
21	Kenilworth	Quinton Avenue	502'	Brunswick	185	0.10%	514
22	Montgomery	Montgomery #1	305'	Stockton	400	0.22%	1,112
23	Montgomery	Montgomery #2	335'	Stockton	300	0.17%	834
24	Mountainside	Bristol Road	315'	Brunswick	330	0.18%	917
25	Mountainside	Charles Street #1	454'	Brunswick	300	0.17%	834
26	Mountainside	Charles Street #2	572'	Brunswick	150	0.08%	417
27	N. PLAINFIELD	BOARD OF EDUCATION	311'	BRUNSWICK	400	0.22%	1,112
28	PISCATAWAY	ROCK AVENUE	350'	BRUNSWICK	150	0.08%	417
29	PLAINFIELD	FIFTH STREET	350'	BRUNSWICK	300	0.17%	834
30	Plainfield	George Street	350'	Brunswick	125	0.07%	347
31	PLAINFIELD	NETHERWOOD #1	350'	BRUNSWICK	220	0.12%	611
32	PLAINFIELD	NETHERWOOD #2	500'	BRUNSWICK	225	0.13%	625
33	PLAINFIELD	NETHERWOOD #3	350'	BRUNSWICK	600	0.33%	1,668
34	Plainfield	Netherwood #4	400'	Brunswick	300	0.17%	834
35	Plainfield	Netherwood #5	350'	Brunswick	300	0.17%	834
36	Plainfield	Netherwood #6	300'	Brunswick	325	0.18%	903
37	Plainfield	Netherwood #7	350'	Brunswick	350	0.20%	973
38	Plainfield	Netherwood #8	304'	Brunswick	300	0.17%	834
39	Plainfield	Netherwood #9	350'	Brunswick	300	0.17%	834
40	Plainfield	Netherwood #10	350'	Brunswick	300	0.17%	834
41	Plainfield	Netherwood #11	350'	Brunswick	250	0.14%	695
42	Plainfield	Netherwood #12	352'	Brunswick	400	0.22%	1,112
43	PLAINFIELD	PROSPECT AVENUE	350'	BRUNSWICK	300	0.17%	834
44	Plainsboro	Plainsboro #1	120'	Raritan	350	0.20%	973
45	Plainsboro	Plainsboro #2	208'	Raritan	295	0.16%	820
46	Princeton	Harrison Street #1	503'	Stockton	100	0.06%	278
47	Princeton	Harrison Street #4	302'	Stockton	150	0.08%	417

Elizabethtown Water Compa
Active Well List - June 15, 1995

	Municipality	Facility Name	Well Depth (feet)	Formation	Pump Cap. (gpm)	% Total System Flow	Population Per Well
48	Princeton	Harrison Street #5	300'	Stockton	240	0.13%	667
49	Princeton	Harrison Street #6	335'	Stockton	390	0.22%	1,084
50	Princeton	Harrison Street #7	300'	Stockton	65	0.04%	181
51	Princeton	Stony Brook #2	300'	Stockton	300	0.17%	834
52	Princeton	Stony Brook #3	353'	Stockton	400	0.22%	1,112
53	Princeton	Stony Brook #4	382'	Stockton	300	0.17%	834
54	Princeton	Stony Brook #6	304'	Stockton	450	0.25%	1,251
55	Princeton	Stony Brook #7A	350'	Stockton	600	0.33%	1,668
56	Princeton	Stony Brook #8	302'	Stockton	600	0.33%	1,668
57	Raritan Township	Maple Glen	355'	Brunswick	250	0.14%	695
58	**SCOTCH PLAINS**	**ABERDEEN ROAD**	**350'**	**BRUNSWICK**	**200**	**0.11%**	**556**
59	Scotch Plains	Glenside Avenue	540'	Brunswick	200	0.11%	556
60	Scotch Plains	Jerusalem Road #1	650'	Brunswick	275	0.15%	764
61	Scotch Plains	Jerusalem Road #2	665'	Brunswick	350	0.20%	973
62	Scotch Plains	Jerusalem Road #3	708'	Brunswick	150	0.08%	417
63	**SOUTH PLAINFIELD**	**CLINTON AVENUE**	**350'**	**BRUNSWICK**	**475**	**0.26%**	**1,320**
64	**SOUTH PLAINFIELD**	**EIGHTH STREET**	**350'**	**BRUNSWICK**	**450**	**0.25%**	**1,251**
65	Tewksbury	Pottersville	300'	Pre-Cambrian	100	0.06%	278
66	Union	Hummocks #4A	117.5'	Brunswick	70	0.04%	195
67	Union	Hummocks #5A	128'	Brunswick	100	0.06%	278
68	Union	Hummocks #6AR	130'	Brunswick	300	0.17%	834
69	Union	Hummocks #7A	233'	Brunswick	85	0.05%	236
70	Union	Hummocks #8A	114'	Brunswick	200	0.11%	556
71	Union	Hummocks #17	99.5'	Brunswick	250	0.14%	695
72	Union	Hummocks #H2	110'	Brunswick	150	0.08%	417
73	Union	Ranney Well Pump #1	99'	Brunswick	2,500	1.39%	6,948
74	Union	Ranney Well Pump #2	99'	Brunswick	2,500	1.39%	6,948
75	West Windsor	Jefferson Park #1	121'	Raritan	600	0.33%	1,668
76	West Windsor	Jefferson Park #2	126'	Raritan	600	0.33%	1,668
				Total Pumpage Capacity:	26,490	14.78%	73,624
				Total Intake Capacity:	152,778		
				Total System Capacity:	179,268		

Total Service Connections (Elizabethtown Water Company): 183,853
Population/Household (Middlesex County): 2.71

Total Population Served: 498,242

Notes:

1. **Wells within four miles of the Comell Dubilier Electronics, Inc. Site shown in bold and caps.**
2. **% Total System Flow = (Pumpage Capacity / Total System Capacity) x 100.**
3. **Population Per Well = (% Total System Flow x Total Population Served) / 100**

Cornell Dubilier Electronics, In
Elizabethtown Water Company Wells
Located Within Four Miles of the Site

Facility Name	Formation	Distance Category (miles)	Pumpage Capacity (gpm)	% Total System Flow	Population Per Well
CLINTON AVENUE	BRUNSWICK	1 - 2	475	0.26%	1,320
EIGHTH STREET	BRUNSWICK	1 - 2	450	0.25%	1,251
BOARD OF EDUCATION	BRUNSWICK	2 - 3	400	0.22%	1,112
ROCK AVENUE	BRUNSWICK	2 - 3	150	0.08%	417
FIFTH STREET	BRUNSWICK	2 - 3	300	0.17%	834
PROSPECT AVENUE	BRUNSWICK	2 - 3	300	0.17%	834
GREEN BROOK #1	BRUNSWICK	3 - 4	310	0.17%	862
GREEN BROOK #2	BRUNSWICK	3 - 4	650	0.36%	1,807
GREEN BROOK #3	BRUNSWICK	3 - 4	60	0.03%	167
GREEN BROOK #4	BRUNSWICK	3 - 4	350	0.20%	973
GREEN BROOK #5	BRUNSWICK	3 - 4	315	0.18%	875
GREEN BROOK #6	BRUNSWICK	3 - 4	280	0.16%	778
GREEN BROOK #7	BRUNSWICK	3 - 4	180	0.10%	500
GREEN BROOK #8	BRUNSWICK	3 - 4	500	0.28%	1,390
GREEN BROOK #9	BRUNSWICK	3 - 4	500	0.28%	1,390
GREEN BROOK #11	BRUNSWICK	3 - 4	340	0.19%	945
ROCK AVENUE	BRUNSWICK	3 - 4	330	0.18%	917
NETHERWOOD #1	BRUNSWICK	3 - 4	220	0.12%	611
NETHERWOOD #2	BRUNSWICK	3 - 4	225	0.13%	625
NETHERWOOD #3	BRUNSWICK	3 - 4	600	0.33%	1,668
ABERDEEN ROAD	BRUNSWICK	3 - 4	200	0.11%	556

Total Population (1 - 2 Mile Ring): 2,571
Total Population (2 - 3 Mile Ring): 3,196
Total Population (3 - 4 Mile Ring): 14,063

APPENDIX B

State of New Jersey
Department of Environmental Protection

Christine Todd Whitman
Governor

Robert C. Shinn, Jr.
Commissioner

APR 02 1997

Richard L. Caspe, Director
Emergency and Remedial Response Division
U.S. Environmental Protection Agency, Region II
290 Broadway
New York, New York 10007-1866

Re: Removal Request - Cornell Dubilier Electronics Inc.
333 Hamilton Boulevard
South Plainfield, Middlesex County

Dear Director Caspe:

The New Jersey Department of Environmental Protection (Department) hereby submits the Cornell Dubilier Electronics Inc. site ("site") for CERCLA removal action consideration. The following information details the case history and supports the removal request.

The site is located at 333 Hamilton Boulevard in South Plainfield Borough, Middlesex County. It is approximately 25 acres in size and is bordered to the north, west and south by commercial and residential properties. The area to the east of the site is zoned and utilized entirely for industrial purposes. The site is designated as Block 256, Lot 1 on the municipal tax map of the Borough of South Plainfield. Cornell Dubilier Electronics Inc. (CDE) owned the site from 1956 to 1961. The current property owner is DSC of Newark Enterprises Inc.

CDE produced capacitors and tested transformer oils at the site until 1961 when the company vacated the site. Currently, the site is occupied by the Hamilton Industrial Park which consists of approximately 15 small industries.

During the years CDE operated from the site it has been alleged that the company dumped transformer oil contaminated with polychlorinated biphenyls (PCBs) directly onto soil at the site. Also, information obtained by the Department's Responsible Party Investigation Unit indicates that waste generated by CDE operations (i.e. spent filter material from the PCB recovery system, residue from trichloroethylene recycling units, capacitors etc.) were landfilled at the site.

On September 11, 1986 Department personnel conducted a Site Inspection and collected soil, surface water and sediment samples. Several metals, volatile organic compounds (VOC) and PCB contamination was detected in the soil. PCB contamination was also detected in sediment samples.

On February 13, 1992 the Department issued a Directive to CDE to 1) determined if the discharges of hazardous substances has contaminated the ground water at the site, 2) if the ground water has been contaminated, determine if the contamination is leaving the site, 3) remediate all sources of the contamination and 4) if the contamination has migrated off site, to institute measures to prevent contamination from migrating any further off site.

On June 19, 1992 the case was transferred to the Division of Publicly Funded Site Remediation (DPFSR) due to non-compliance by CDE to the directive. The South Plainfield area has been identified as a regional ground water contamination area. DPFSR determined that water lines and point of entry treatment systems (POETS) have been or were being installed under the Spill Fund Program in the area near CDE and thereby no additional actions were taken.

On June 8, 1994, as part of a Site Inspection Prioritization, EPA collected soil, surface water and sediment samples. Sampling results revealed elevated concentrations of semivolatile organic compounds, PCBs, and inorganic constituents in the site soil. Sediment samples were inconclusive due to conflicting analysis results.

On February 26, 1996 EPA resampled the site. PCB contamination was documented in both soil and sediment samples.

In addition, the current property owner, DSC of Newark Enterprises Inc., has submitted several reports to the Department for review under the ISRA program during the period from 1994 to 1996. Department review of the submissions revealed that the reports did not disclose all of the environmental issues, including PCB contamination, associated with the site.

EPA has requested the Department's concurrence to propose the site for NPL listing. In addition, the EPA Removal Action Branch has conducted an assessment to evaluate the threat posed by PCB contaminated soil at the site. The Removal Action Branch is currently working with responsible parties to initiate remedial activities which will stabilize any immediate threats to the environment and the local population.

It should be noted that only soil and sediment samples have been collected at the site and, to date, a ground water investigation has not been conducted. However, based on existing information, the CDE site is a likely contributor to the regional ground water contamination documented in the area.

The Department views the presence of PCB contaminated soil to be a serious direct contact threat to the residents in the immediate area. Also, it appears past site activities are responsible for the regional ground water contamination documented in the area, however, additional ground water data needs to be collected at the site to confirm the link to the off site ground water impact.

As indicated in the above summary of activities, the EPA is already actively involved at the site. This document formally refers the site to EPA for removal action activities.

As such, the Department therefore requests that EPA sample, characterize and dispose of all hazardous substances found at the site in such a way as to safeguard the local population, and perform any necessary investigatory and remedial work at the site as deemed appropriate.

Should your staff require additional information please have them contact Janet M. Smolenski of the Bureau of Field Operations, Case Assignment Section at (609) 292-2943.

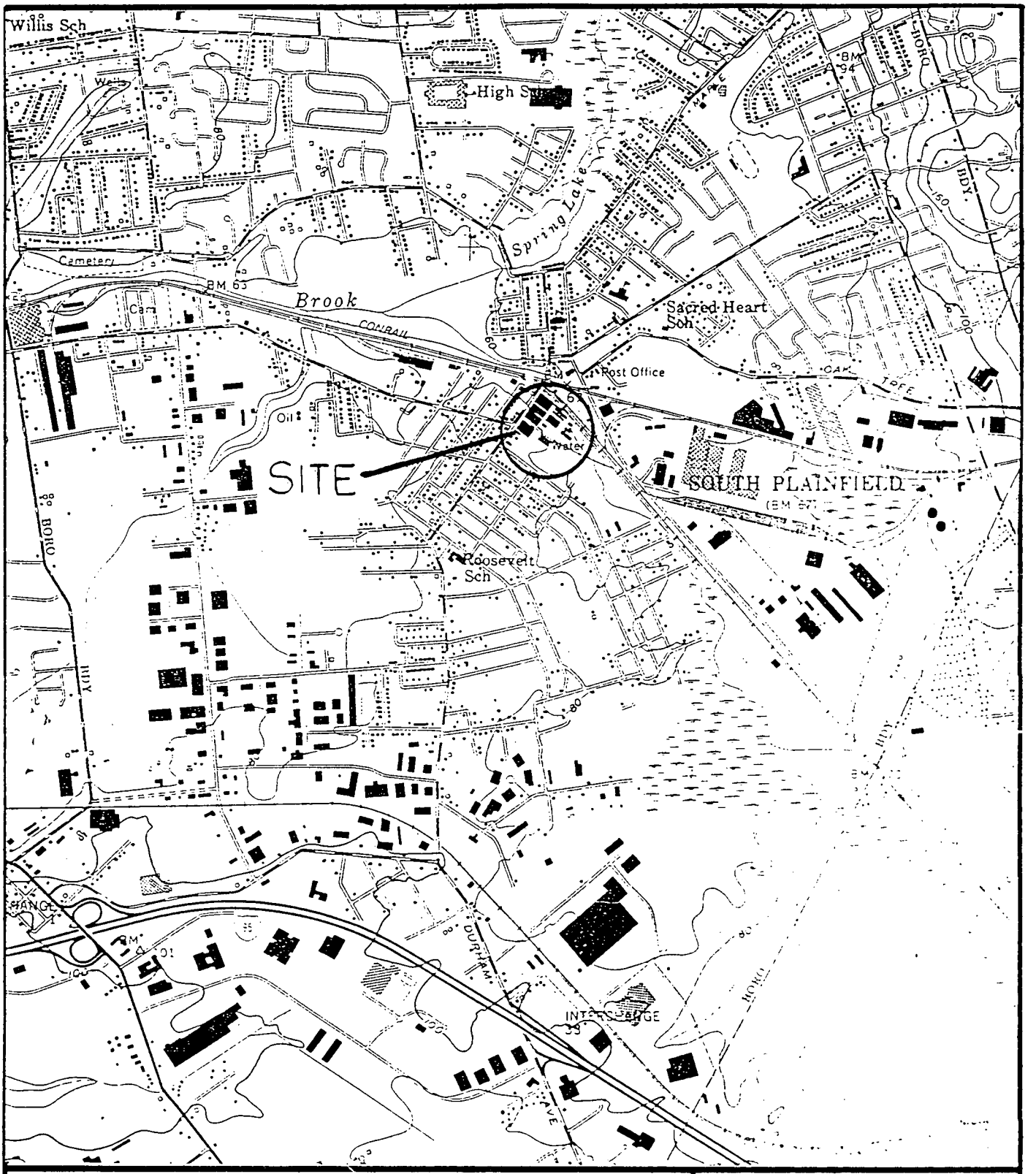
Sincerely,

Robert R. Van Fossen

Robert R. Van Fossen
Assistant Director
Discharge Response Element

c: Richard Salkie, Branch Chief, Removal Action Branch, EPA
Bruce Sprague, Branch Chief, Response and Prevention Branch, EPA
Al Kaczoroski, Bureau Chief, Bureau of Field Operations
Janet Smolenski, EPA Removal Action Coordinator, Bureau of Field Operations - Case Assignment Section

APPENDIX C



WESTON MANAGERS DESIGNERS/CONSULTANTS **Roy F. Weston, Inc.** **FEDERAL PROGRAMS DIVISION**	EPA TM E. WILSON	CORNELL-DUBILIER ELECTRONICS S. PLAINFIELD, N.
IN ASSOCIATION WITH RESOURCE APPLICATION, Inc. C.C. JOHNSON & MALHOTRA, P.C., R.E. SARRIERA ASSOCIATES, PRC ENVIRONMENTAL MANAGEMENT, AND GRB ENVIRONMENTAL SERVICES, INC.	START PM M. MAHNKOPF	FIGURE 1 SITE LOCATION MAP

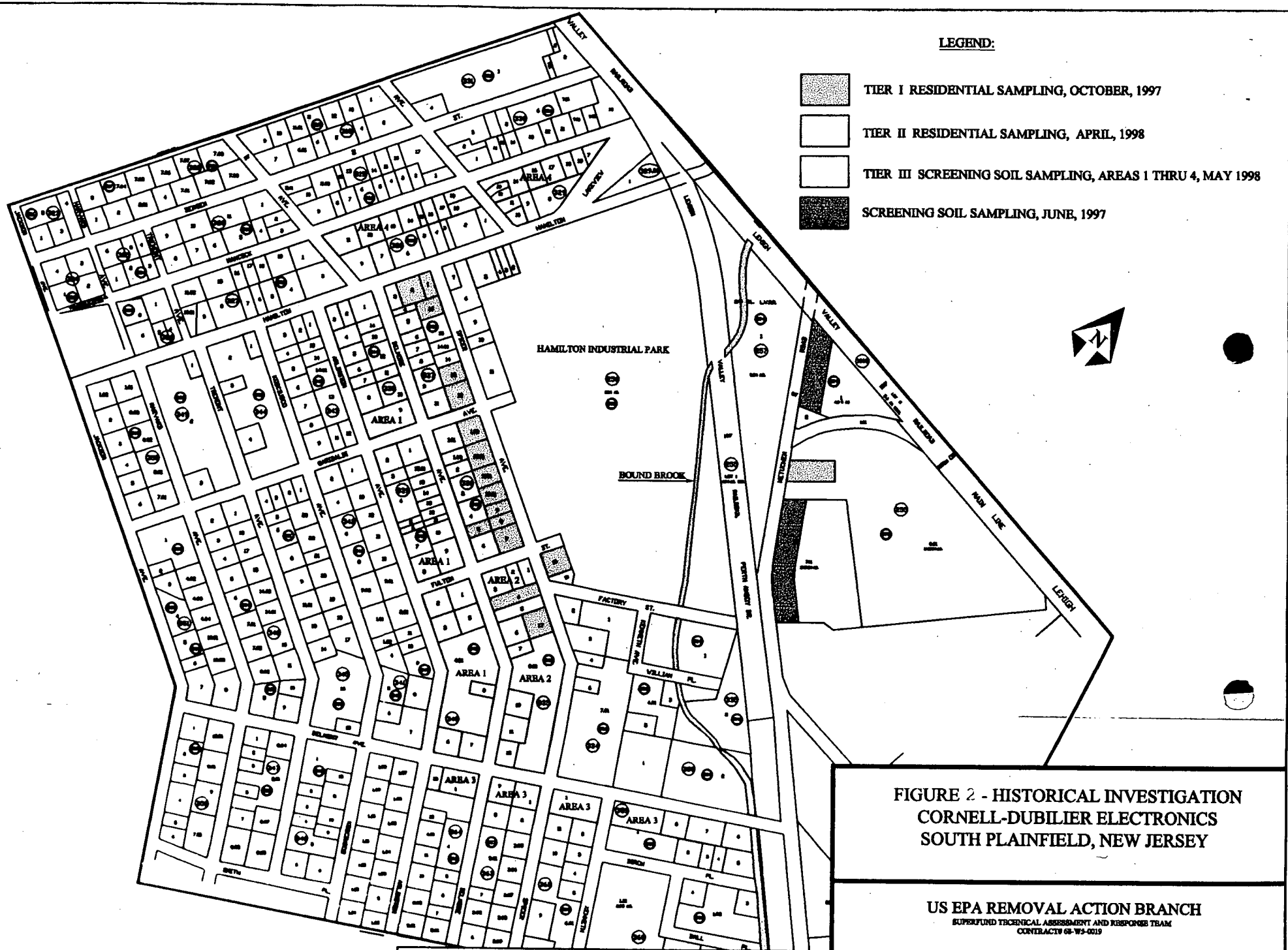


FIGURE 2 - HISTORICAL INVESTIGATION CORNELL-DUBILIER ELECTRONICS SOUTH PLAINFIELD, NEW JERSEY

US EPA REMOVAL ACTION BRANCH

SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM
CONTRACT# 68-W5-0019

Roy F. Weston, Inc.
FEDERAL PROGRAMS DIVISION

IN ASSOCIATION WITH PRC ENVIRONMENTAL MANAGEMENT, INC.
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draft RD
RI FS

APPENDIX D

HEALTH CONSULTATION

CORNELL DUBILIER ELECTRONICS INCORPORATED

SOUTH PLAINFIELD, MIDDLESEX COUNTY, NEW JERSEY

CERCLIS NO. NJD981557879

Prepared by:

Exposure Investigation and Consultation Branch
Division of Health Assessment and Consultation
Agency for Toxic Substances and Disease Registry

Background and Statement of Issues

The Region II U.S. Environmental Protection Agency (EPA) has requested that the Agency for Toxic Substances and Disease Registry (ATSDR) evaluate analytical data from residential properties located across the street from the Cornell-Dubilier Electronic Inc. site in South Plainfield, New Jersey, and determine if polychlorinated biphenyls (PCBs) in indoor dust and surface soils are at levels of public health concern [1]. Exposure Investigation and Consultation Branch (EICB) has completed several verbal health consultations regarding on-site PCB contamination and made public health recommendations that have included sampling of residential homes near the site [2,3].

The Cornell-Dubilier Electronics Site is located at 333 Hamilton Boulevard in South Plainfield, Middlesex County, New Jersey. The 25 acre site is bordered by commercial businesses and residences on the south, west and north, and on the southeast, east, and northeast by an unnamed tributary to Bound Brook [2]. It is estimated that 540 persons reside within 0.25 miles of the site; the nearest residence is approximately 200 feet from the site [2].

During the 1950s, Cornell-Dubilier Electronics, Inc. manufactured electronic parts and components, and tested transformer oils. Discarded electronic components were landfilled onsite and transformer oils contaminated with PCBs were reportedly dumped directly onto site soils. The company vacated the site in the early 1960s [2].

The site is currently known as the Hamilton Industrial Park and is occupied by an estimated 15 commercial businesses. Numerous companies have operated at the site as tenants over the years [2]. A paved driveway is used to enter the park; the pavement ends within 100 yards of entering the park. It has been observed that vehicles entering the industrial park during dry conditions create airborne dust [2]. The driveway leads into what was formally a dirt, gravel, and stone roadway that nearly encircles the business structures at the site. The roadway separates the structures from a heavily vegetated vacant field, and was paved by EPA in September 1997 as part of the site stabilization process to mitigate migration of contaminated dust.

On March 24, 1998, ATSDR and EPA Region II held a conference call to discuss indoor dust and surface soil data collected from 16 residential properties and analyzed for PCBs.

The residential properties sampled by EPA were selected using information obtained from air modeling. The indoor dust and surface soil sampling was conducted to evaluate health impacts to area residents from PCB contamination .

In October 1997, EPA Region II collected surface soil samples from 16 residential properties [4]. The soils were analyzed for PCBs. Approximately 20 surface soil samples were collected from each residential property. PCB levels in surface soils ranged from none detected to 22 parts per million (ppm).

In November 1997, EPA Region II collected indoor dust samples from 12 residential properties [5]. The indoor dust samples were analyzed for PCBs. Approximately two to four indoor dust samples were collected from each residential property. PCB levels in indoor dust ranged from none detected to 205 ppm (or 117 micrograms (ug) total PCBs in sample mass).

Discussion

Because the properties sampled were residential, it is anticipated that populations potentially exposed to contamination will include children and adults.

PCBs can be absorbed into the body via ingestion, inhalation, or dermal exposure following ingestion of dust or soil, inhalation of PCB-laden dust, or direct dermal contact with PCBs in soil or dust. In humans, long-term exposure to PCBs can affect the skin and liver; reproductive, endocrine, immunosuppressive, and carcinogenic effects have been observed in animal studies [6]. PCBs have very low potential for producing acute toxic effects [6].

An immunosuppressant effect was observed in a study of monkeys chronically exposed to 0.005 mg/kg/day of PCBs. On the basis of this study of monkeys, ATSDR has derived a chronic oral Minimal Risk Level (MRL) for PCBs of 2.0E-05 mg/kg/day. An MRL is defined as an estimate of daily human exposure to a dose of a chemical that is likely to be without an appreciable risk of adverse noncancerous effects over a specified duration of exposure [6]. Screening level exposure-dose calculations indicate that children in some houses may exceed the MRL.

Since screening analysis identified potential for health concern, soil and dust PCBs concentrations were evaluated using averaged daily doses estimated for both child and adult residential exposure scenarios and both cancer and non-cancer dose response relationships for PCBs. The exposure dose equation and parameter assumptions used for soil assessment followed that found in EPA RAGS. Exposure equations used for indoor dust assessment were based on ongoing methods development by a combined ATSDR/EPA/CDC workgroup on residential dust pathway analysis. Evaluations of health concerns were made on a house-by-house basis using estimated excess individual cancer risk, a margin of exposure analysis relative to the identified LOAEL for immunosuppression, and qualitative consideration of uncertainty based on site specific data.

Conclusions

Based on the indoor dust and surface soil analytical data for the residential properties located across the street from the Cornell-Dubilier site, the one point and time sampling event for both indoor dust and surface soils, the unknown location of an elevated level of PCBs on a specific residential property (e.g., the one 22 ppm elevated PCB level may be located next to a child's play area or near the entryway into the home), and the uncertainty of the future indoor dust levels (how the indoor dust levels would be impacted by surface soil contamination is uncertain), ATSDR concludes the following:

1. Elevated levels of PCBs were detected in indoor dust and the surface soils at residential properties that may pose a health concern or potential health concern to the residents. The health evaluations for the residential properties are presented in the following
table:

Table 1: Health Categories for Residential Properties:

Residential Property Designations	Health Categories	Follow up activities needed for residents with elevated levels of PCBs in indoor dust and/or surface soils
1. E	Health concern (a)	reduce/stop potential exposure to indoor dust and surface soils contaminated with PCBs health education on ways to reduce/stop potential exposure to indoor dust and/or surface soils
2. D	Health concern (a)	reduce/stop potential exposure to indoor dust and surface soils contaminated with PCBs health education on ways to reduce/stop potential exposure to indoor dust and/or surface soils
3. C	Health concern (a)	reduce/stop potential exposure to indoor dust and surface soils contaminated with PCBs health education on ways to reduce/stop potential exposure to indoor dust and/or surface soils
4. G	*Potential health concern (b)	reduce/stop potential exposure to indoor dust and surface soils contaminated with PCBs health education on ways to reduce/stop potential exposure to indoor dust and/or surface soils resample indoor dust to ensure that future indoor dust levels are not elevated (surface soil contamination may be tracked into homes)
5. O	Potential health concern (b)	reduce/stop potential exposure to indoor dust and surface soils contaminated with PCBs health education on ways to reduce/stop potential exposure to indoor dust and/or surface soils resample indoor dust to ensure that future indoor dust levels are not elevated (surface soil contamination may be tracked into homes)

6. J	Potential health concern (b)	reduce/stop potential exposure to indoor dust and surface soils contaminated with PCBs health education on ways to reduce/stop potential exposure to indoor dust and/or surface soils resample indoor dust to ensure that future indoor dust levels are not elevated (surface soil contamination may be tracked into homes)
7. B	Potential health concern (b)	reduce/stop potential exposure to indoor dust and surface soils contaminated with PCBs health education on ways to reduce/stop potential exposure to indoor dust and/or surface soils resample indoor dust to ensure that future indoor dust levels are not elevated (surface soil contamination may be tracked into homes)
8. A	Potential health concern (b)	health education on ways to reduce/stop potential exposure to indoor dust and/or surface soils resample indoor dust to ensure that future indoor dust levels are not elevated surface soils at this property did not represent a health concern; however, PCBs were detected in the indoor dust.
9. I	Potential health concern (b)	reduce/stop potential exposure to indoor dust and surface soils contaminated with PCBs health education on ways to reduce/stop potential exposure to indoor dust and/or surface soils resample indoor dust to ensure that future indoor dust levels are not elevated (surface soil contamination may be tracked into homes)
10. M	Potential health concern (d)	reduce/stop potential exposure to surface soils contaminated with PCBs health education on ways to reduce/stop potential exposure to indoor dust and/or surface soils indoor dust not a health concern; however, surface soil contamination may contribute to future indoor dust contamination
11. F	Potential health concern (d)	reduce/stop potential exposure to surface soils contaminated with PCBs health education on ways to reduce/stop potential exposure to indoor dust and/or surface soils indoor dust not a health concern; however, surface soil contamination may contribute to future indoor dust contamination
12. L	No health concern (e)	no action at this time

13. H.	Potential health concern (c)	sample indoor dust health education on ways to reduce/stop potential exposure to indoor dust and/or surface soils
14. K.	Potential health concern (c)	sample indoor dust health education on ways to reduce/stop potential exposure to indoor dust and/or surface soils
15. N	Potential health concern (c)	sample indoor dust health education on ways to reduce/stop potential exposure to indoor dust and/or surface soils
16. P	Potential health concern (c)	sample indoor dust health education on ways to reduce/stop potential exposure to indoor dust and/or surface soils

(a) Health concern - take action to reduce/stop exposures to PCBs
* Potential health concern- data needed, prudent to take action at this time to reduce exposures:
(b) resample indoor dust to ensure that future indoor dust levels are not elevated (surface soil) contamination may be tracked into homes)
(c) indoor dust sampling should be conducted to better assess the health concern at these residential properties
(d) surface soils are elevated and may pose a future health concern for indoor dust contamination
(e) No health concern- no action needed at this time

2. The nature and extent of off-site migration of PCB contaminated dust via wind has not been determined.

3. The nature and extent of surface soil PCB contamination in this residential community has not been determined.

Recommendations

1. Prevent potential exposure to PCBs in surface soil at levels of public health concern. ATSDR believes that an interim measure or permanent solution to the contaminated residential yards and/or indoor dust should be put in place within six months.

2. As additional data becomes available on the extent and degree of off-site contamination, provide health education to residents on ways to reduce their potential exposure to polychlorinated biphenyls (PCBs) present in indoor dust and surface soils. ATSDR will assist in the health education at this site through the Division of Health Assessment and Consultation's Community Involvement Branch.

3. Different cleaning methods should be used in the homes where elevated levels of PCBs were detected in indoor dust by wet/damp dusting and mopping on floors and hard surfaces with a cleaning solution such as Lestoil or Mr.Clean. These products are mineral-oil-based cleaners that help to clean up the PCBs. Carpets should also be shampooed with these products. Prior to cleaning of the home interior surfaces by EPA, the use of a regular vacuum cleaner to remove dust is NOT recommended unless a HEPA (high efficiency particulate adsorption) filter is placed on the vacuum cleaner exhaust.

4. As needed, additional dust suppression techniques should be used at the site to prevent off-site migration of contaminated dust.

5. Conduct indoor dust sampling at residential properties where only surface soil sampling was conducted.

6. Determine if other residences in the area are contaminated (include soil samples from properties located upwind of the facility).

If further clarification is required or when additional information becomes available, please contact this office at 404/639-0616.

Tammie McRae, M.S. Date: 5-17-98

Concurrence: Date: 5/20/98

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4. Cornell-Dubilier Electronics Sampling Trip Report (Surface Soil Sampling). DCN#: START-02-F-01454. TDD#: 02-97-02-0015. PCS#: 2076. Sampling Date: October 27,28,29 and 30, 1997.

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6. Toxicological Profile for Polychlorinated Biphenyls (PCBs) Update. U.S. Department of Health and Human Services. Agency for Toxic Substances and Disease Registry. September 1997.

7. PCBs: Cancer Dose-Response Assessment and Application to Environmental Mixtures. National Center for Environmental Assessment, Office of Research and Development, U.S. Environmental Protection Agency. EPA/600/P-96/001F. September 1996.

APPENDIX E